Electricity Is Always at Your Service to Make Home Life Easy

'NOSEY' AMERICAN BOYS HAVE GENIUS

Their Prying Curiosity Is Advancing Electrical Discoveries.

Why is the average American boy cluttering up the attic or basement of his father's house with a varied assortment of electrical apparatus? Why is he interested in wireless telegraphy and telephony? Why is he forever spending his pin money on these things and lavishing worlds of enthusiasm on a subject which the rest of the household ignores, or, at most, indulgently tolerates?

These questions of a Cleveland observer, who, by the way, is also a father of one of these inquisitive youths, are answered by a trade authority, who avers that such precocious lads are born investigators, whose prying curiosity is contributing materially to the world's present and future electrical progress.

Electrical apparatus is not merely a plaything with them. They realize as they delve deeper into the mysterious subject that it is a practical, living, and engrossing matter. They are getting an early start in a field in which they will—many of them—discover even greater wonders for the generations to come.

And in this connection it is remarked that few people realize the part the American boy has played in the progress of the world. In the early days of this republic their investigations took an agricultural turn in the development of improved ways of tilling the soil and harvesting grain by means of machinery.

Show Inventive Genius.

Later they experimented with steam and contributed much to the development of steam transportation in the way of both railways and steamships. Then came the motor car, and American boys displayed amply their inventive genius.

Yet it is safe to say that boys generally were not so generally awakened to the world of science by any other subject than they have been to the controlling of electrical forces. Here was a theme which gave their imagination play; here was a subject which, seemed as elusive and mysterious as other mechanical studies were evident and commonplace.

But the inquisitive—or, as the less sympathetic say it, the "nosey"—American boy, did not come into his own until it was found that electrical waves could be directed through the air. The uncanny quality of this unseen element appealed so strongly to his elert imagination that even though he was aroused by the sending of current through a wire, he jumped at the chance to hear distinct sounds by means of the wireless. Thus a new crop of scientists was soon rigging receiving apparatus in attics and other available places.

At first he had to master the telegraphic code, but that was easy! Then came that great modern wonder—the wireless telephone. Now the wideawake boy is sitting in the paternal cellar or attic, "listening-in" on the conversation of the universe.

COMBINES PHONE WITH TELEGRAPH

New System on Exhibition At Sterling Hotel Revolutionizes Old Methods.

There is now exhibited for the first time in public, at the Sterling Hotel, Thirteenth and E streets northwest, what may well be termed the "last word" in telegraphy and telephony, using but one wire for the two.

For some years a so-called "simplex" system of simultaneous telegraphy and telephony using two wires, and also a "composite" system using one wire, have been quite extensively used in the United States.

Throughout the rest of the world, however, very little has yet been attempted in this connection. The "simplex" and the "composite" have been, "filling the bill," much as the very first of everything fills the bill until later discoveries or improvements crowd them out.

It must be admtted that the simplex in particular has done mighty well, especially in favorable weather. Both of those systems, however, are quite costly to install, expensive to keep up, and require high priced expert attention almost constantly.

SERVES DUAL PURPOSE.

The new system supplies a method by which one wire may be used for either telegraphing or telephoning. Practically all costly parts, such as repeating coils, bridging condensers, and so forth, are entirely done away with; and all of the telegraph keys in the circuit may be left open without in the least bothering the current pathway.

The latter point is a valuable asset indeed. At the present time the American telegraph key must be kept closed when not in use, otherwise the entire circuit is totally unworkable. It is true that in France, Spain and other countries telegraph circuits are so arranged that the keys are figuratively "open," but other drawbacks outweigh that one single good point.

In the new equipment there is nothing concealed behind the switchboard. The entire apparatus for both telephoning and telegraphing is contained within a simple, neat low base which is light, handy and portable. It may be "plugged" in or out of any circuit at will and is subject to any desired switchboard arrangement, the same as the most simple key, relay and sounder may be today.

ARRANGEMENT UNIQUE.

The telegraph battery or power arrangement is unique in that every office on the line automatically supplies a portion of the electric current after the fashion of ordinary telegraph repeaters, but without the whimsical stubbornness of the latter. By thus distributing power evenly along the circuit the current leakage at any point due to a rain storm is localized, so that as long as a tiny bit of the current does manage to struggle through to the next station it there feeds up to full strength and "goes on, and on" (as they said in the Chicago convention).

And another talking point that is, not at all to be overlooked, is that when the telegraph is not in use there is no electrical current being used. That means a tremendous saving in battery upkeep. It is well known that all American telegraph circuits of today require constant currents at all times.

When one stops to think of the hundreds of thousands of miles of telegraph circuits in the United States, probably three-quarters of which are idle most of the time, especially at night, some idea of the enormous amount of electricity expended uselessly may be grasped.

INVENTOR IS WIZARD.

The inventor of this new system of telephoning and telegraphing over one wire is William R. Garner, an electrical wizard as well as a mechanical genius. For more than a score of years he has been delving into science alone, apart, away from the too well trodden paths of book learning, studying the infinitisimal, latent vital peculiarities and habits of the universe; because he was not content to believe that we of the world have even begun to know it all.

It is undeniable that no writer can truthfully say that electricity is so-and-so; because nobody knows what it is. We know how to do a certain thing to produce a desired effect; and content ourselves by calling the cause of electricity.

The latest theory is that a copper wire for example, is composed of molecules, atoms and electrons, the latter being so teeny that it figuratively takes a fistfull to fill the space required by an atom. When properly excited these teeny weeny wigglers light out down the copper wire at the breakneck speed of tens of thousands of miles per second.

Another idea is that the exciting medium lights astride one of the electrons and worries him, like a horse fly nipping a neurotic nag, whereupon the electron gets fidgety and switches its tail, thereby swatting his next neighbor. The second electron, thus awakened, gets peeved and punches the next fellow, and so on.

In this way, it will be seen that while a wave of action passes along the wire, or through it, from one end of the copper wire to the other, none of the electrons have actually made the entire journey.

All that we can do at present is to study these theories, form our own individual conclusions, and let 'er go at that. Garner has kept pace with the discoveries and theories of others; but at the same time he has tried to go beyond them. It is highly instructive and interesting to hear him talk upon technical subjects.

He has studied in particular the action of the solar ray, the repulsion effect of the earth's crust and the electrical actions thus engendered, and he has put these phenomena into practical use in his combination telegraph and telephone with gratifying results.

TRY THESE RECIPES ON YOUR ELECTRIC STOVE

That the electric stove has its advantages in more ways than one is proven by the fact that candy made over its plates is more palatable than that cooked over a gas or coal fire.

Here's a pair of recipes. Try them and prove it for yourself.

HONEY CREAM CANDY.

1 cup of strained honey, ½ cup of thick cream, 1 cup of sugar, 1 tablespoon of water. Put the above ingredients into a small saucepan and set on the electric stove. Turn the current on to full heat and stir mixture until it forms a hard ball when a little is dropped into ice water. Take from the stove and pour on a large well-buttered plate. When cool pull as you would molasses candy. Cut into strips and set in dry, cool place.

BUTTERSCOTCH.

½ pound brown sugar, 1 tablespoon vinegar, 1 gill of water, 2 ounces of butter. Put the sugar, vinegar and water in a saucepan and set on the electric stove, with current on full heat, let it boil for ten minutes, then add the butter. Continue to boil until hard and brittle when a little is dropped into ice water. Pour into well buttered shallow pans, and when nearly cold cut into oblong pieces. If you wish to keep the candy, put each bit in wax paper.

CREOLE CANDY KITCHEN IN ONE NEW YORK STORE

A special feature of a big new candy store in New York city is a creole candy kitchen in operation right in the store, in which are made the pecan pralines which have been described as the "crystallized romance of Old New Orleans. Formerly, in that city, one bought pralines from an old negress, who each morning took her place in an accustomed spot, with her basket of home-made pralines, over which she waved a palmetto fan while she patiently waited for customers.

After the passing of the old-time purveyors of pralines, the confections were made by some famous New Orleans confectioners who placed them on the market nationally, and the pralines are now sent everywhere, put up in pleasing packages.

The pralines are now made in creole candy kitchens in the new retail candy stores. They are made electrically by experts who have been brought up from New Orleans, and as one of the experts expresses it, "they are daintily made." Open copper kettles are used, the heat being regulated by a conventient switch. Whitey brown sugar, also from New Orleans, is put into the kettles with water, and boiled down to a rich brown syrup, then the pecans are added and the pralines crystallize on white paper before the consumer's eyes. It is needly to say the confection finds many consumers.

ELECTRICITY NOW COMMUNITY NEED

Public Utilities Corporations Making Power Are Realizing Value of Local Capital.

Electricity has placed within the public's reach the forces of nature for comfort and convenience. It has brought the power of the cataract to fingertip control. It has brought safe light and safe heat and refreshing coolness to millions of homes. It is always "in stock" for instant delivery.

Serving the public so unobtrusively, few people realize how important electricity has become in their daily life. It supplies illumination for the home; it washes the clothes and irons them easily; it cleans the house; it heats the electric range or cooks food in a chafing dish; it makes tea in a samovar; it toasts bread just right and percolates coffee; it runs the sewing machine and does many other useful things.

It has become such a commonplace convenience that we give little thought to the central generating station that supplies this current and the systematic service upon which the community is so dependent.

INCREASED DEMANDS.

Increased demands from the consuming public have revolutionized equipment and operating methods until the electric service of a few years ago seems almost obsolete now. From a haphazard system of distribution based on a demand for a necessity, electric service has developed into a scientific, highly organized efficient business with the newest, most progressive engineering and merchandising ideas. New business methods in the sale not only of electricity itself, but of appliances and equipment have created a new department, while the operating improvements are such as almost completely to have altered the science of the commercial generation of electricty.

With the new era new ideas have come. The old policy of compelling the consuming public to seek service which was grudgingly given and poorly supplied, has been entirely supplanted by a spirit of broad co-operation and sane public policy in marked contrast to the methods of the past. The old autocratic regime of contempt for the feelings of the consumer as expressed in the now obsolete slogan: "The public be damned," has been wisely supplanted by the happier phrase: "The public be served and pleased."

GOOD SERVICE NEEDED.

Carl T. Naumberg, a well-known financial writer in New York, has pointed out that the financial requirements of a live public utility property are ever present and are constantly growing. As a community thrives and enlarges and as its wealth increases, its public service purveyor must keep pace with civic expansion by plant and service extensions.

The varied conditions in the money markets of the world will not serve as an excuse for a delay, for a city insists that its development be not retarded by inadequate service. This feeling while often a hardship on a public service corporation is just in that the consuming public generally stands ready to pay a fair price for what it gets.

"It is a strange phenomenon," continued Neumberg, "that until recently, few if any public utilities have sought to finance themselves in the communities where they are located. This has not only worked a hardship on the public service corporation itself in compelling it to go far afield for capital, but it nas also deprived local investors of an opportunity for making safe and satisfactory investments at rates that are often exceedingly attractive, compared with other forms of investment in the local market."

Local or customer stockholders are bound to take a most intimate interest in the business. They often make constructive suggestions and as they see the company in which they have some ownership striving to meet the growing demands of their territory, they realize that it cannot be done without additional assistance, and in rendering this, their local light and power company becomes a home industry in the true sense of the word.

UTILITIES DEVELOPED BY ELECTRIC SYSTEM

Some idea of the extraordinary development of the utilities of Illinois was given the country at large, when it was announced that the Central Illinois Public Service Company had "hooked up" the last link in a high power transmission line which is now 1,355 miles long and joins the four States of Illinois, Kentucky, Indiana and Iowa. This single line crosses thirty-one counties.

It starts at the hydro-electric development at Keokuk, Iowa, crosses Illinois to Paris, Ill., and from that point runs east to Terre Haute, Ind., thence south to Edwardsville, Ind., and on down to Louisville, Ky. This big transmission line has made possible the abandonment of scores of small town plants that were inefficient. So complete is the "wiring" of the State of Illinois that were the lines drawn on a map they would resemble a spider's web.

THIS HOUSE FULL OF ELECTRIC DEVICES

New Home of Research Chemist Richly Supplied With Labor-Saving Appliances.

Alexander L. Duval d'Adrian, a leading chemist, has recently purchased a home at 311 East Beau street, Washington, Pa., and has installed practically every known convenience and labor-saving appliance that electricity has made possible. He decided to "do it electrically" as thoroughly, and comprehensively as modern ingenuity could devise.

Mr. d'Adrian has fifty-three lamps in the house and garage. Eleven of these are indirect lighting fixtures, and because of the owner's connection with the glass industry, there are several beautiful and efficient pieces.

The table appliances include coffee percolator, teapot, waffle iron, toaster, while in the kitchen is an electric range for matchless cookery, a coffee grinder, and egg and cream beater. An electric refrigerator is soon to be added, and he plans to have an electric ice cream freezer.

Other household conveniences include: two electric irons, two fans, electric washer, ironing machine, vacuum cleaner, sewing machine, water heatters, and a luminous radiator. The player piano is also electrically operated, and there will be a motor to run the phonograph.

An electric heater is attached to the city water line to provide hot water for bathing and other domestic uses, but a cistern pump, with one-half horse power motor and automatic control to maintain constant pressure will supply soft water for laundry and kitchen purposes.

An electric heating system that is decidedly unique is to be installed. Eight radiators with electric heaters attached will be placed throughout the house. These will have a five heat control which will make it possible to regulate the temperature of each room to whatever degree is desired by the occupants. Four of these radiators are 3,000 watts, two are 1,500 watts and two the 800 watts. An eight station intercommunicating telephone system is to connect various rooms in the house and the garage.

Mr. d'Adrian, who is a native of France and was graduated from Sorbonne University, well known to many A. E. F. men who continued their studies there during the "waiting period" after the armistice. In 1912 Mr. d'Adrian came to the United States as chief chemist for a large glass company of Washington, Pa., and he has attained much prominence as a consulting chemist in the glass industry.

VACUUM CLEANER CAN BE USED ON TYPEWRITER

Did you ever try to clean a typewriter? You get along beautifully as you dust off the top, but when you try to go beneath the surface your troubles begin. Your brush, be it long and thin or short and fat, won't reach all the hidden corners.

A vacuum cleaner will help you out. It will suck up all the dust and bits of paper that cling so persistently. The best attachment to use for this purpose is the thin flat one known as the mattress attachment.